Claims

[c1]   1. A mobile phone having a software application for reducing the bitrate of an image to be transmitted by the mobile phone, said mobile phone comprising:

a processor;

a processor readable storage medium;

code recorded in the processor readable storage medium to remove a portion of an original image frame thereby creating dead clusters within the image frame;

code recorded in the processor readable storage medium to fill the dead clusters of the removed portion of the image frame with data to create a new image frame having a smaller bitrate than the original image frame; and

code recorded in the processor readable storage medium to encode the new image frame such that it requires less bandwidth during transmission than the original image frame would require.

[c2]   2. The mobile phone of claim 1 wherein the data used to fill the dead clusters is white data.

[c3]   3. The mobile phone of claim 1 wherein the data used to fill the dead clusters is black data.

[c4]   4. The mobile phone of claim 1 further comprising:
        code recorded in the processor readable storage medium
        to include a representation of the removed portion of the
        original image frame with the new image frame during
        transmission of the new image frame so that it may be
        utilized by the receiver to improve the presentation of
        the received image frame by integrating it back into the
        received image frame.

[c5]   5. The mobile phone of claim 1 further comprising:
        code recorded in the processor readable storage medium
        to automatically determine whether there is a subject
        centered in the original image frame prior to executing
        the bitrate reduction software application on the original
        image frame; and
        code recorded in the processor readable storage medium
        to execute the bitrate reduction software application if
        the original image is determined to contain a primary
        object centered in the image frame.

[c6]   6. The mobile phone of claim 5 automatically determin-
        ing whether there is a subject centered in the original
        image frame is achieved using a contour detection tech-
        nique applied to the data in the image frame.

[c7]   7. A method that enables a mobile phone to reduce the
        bitrate of an image to be transmitted by the mobile

phone, said method comprising:

removing a portion of an original image frame thereby creating dead clusters within the image frame;

filling the dead clusters of the removed portion of the image frame with data to create a new image frame having a smaller bitrate than the original image frame; and

encoding the new image frame such that it requires less bandwidth during transmission than the original image frame would require.

[c8]   8. The method of claim 7 wherein the data used to fill the dead clusters is white data.

[c9]   9. The method of claim 7 wherein the data used to fill the dead clusters is black data.

[c10] 10. The method of claim 7 further comprising:
including a representation of the removed portion of the original image frame with the new image frame during transmission of the new image frame so that it may be utilized by the receiver to improve the presentation of the received image frame by integrating it back into the received image frame.

[c11] 11. The method of claim 7 further comprising:
automatically determining whether there is a subject centered in the original image frame prior to executing

the bitrate reduction software application on the original image frame; and

executing the bitrate reduction software application if the original image is determined to contain a primary object centered in the image frame.

[c12]   12. The method of claim 11 wherein automatically determining whether there is a subject centered in the original image frame is achieved using a contour detection technique applied to the data in the image frame.

[c13]   13. An apparatus that enables a mobile phone to reduce the bitrate of an image to be transmitted by the mobile phone, said method comprising:

means for removing a portion of an original image frame thereby creating dead clusters within the image frame;

means for filling the dead clusters of the removed portion of the image frame with data to create a new image frame having a smaller bitrate than the original image frame; and

means for encoding the new image frame such that it requires less bandwidth during transmission than the original image frame would require.

[c14]   14. The apparatus of claim 13 wherein the data used to fill the dead clusters is white data.

[c15]   15. The apparatus of claim 13 wherein the data used to fill the dead clusters is black data.

[c16]   16. The apparatus of claim 13 further comprising:
means for including a representation of the removed portion of the original image frame with the new image frame during transmission of the new image frame so that it may be utilized by the receiver to improve the presentation of the received image frame.

[c17]   17. The apparatus of claim 13 further comprising:
means for automatically determining whether there is a subject centered in the original image frame prior to executing the bitrate reduction software application on the original image frame; and
means for executing the bitrate reduction software application if the original image is determined to contain a primary object centered in the image frame.

[c18]   18. The apparatus of claim 17 wherein automatically determining whether there is a subject centered in the original image frame is achieved using a contour detection technique applied to the data in the image frame.